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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/669,520	09/24/2003	Masanobu Sato	P/4178-9	4349

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EXAMINER

TADESSE, YEWEBDAR T

ART UNIT	PAPER NUMBER
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1792

MAIL DATE	DELIVERY MODE
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07/22/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/669,520

Applicant(s)

SATO ET AL.

Examiner

YEWEBDAR T. TADESSE

Art Unit

1792

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period **will** apply and **will** expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply **will**, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 June 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 4,5,9,47,48,50-55 and 59-61 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 4,5,9,47,48,50-55 and 59-61 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date: _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date: _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 06/11/2008 has been entered.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 59-61 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claim 59, lines 17-18, the phrase "a notch at a peripheral edge of said substrate, and...and arranged that a peripheral..." lacks proper antecedent basis. For the purpose of examination, the phrase "the notch at the peripheral edge of said substrate, and...and arranged that the peripheral..."

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 4, 9, 47-48, 50-53 and 55 rejected under 35 U.S.C. 103(a) as being unpatentable over JP 10-116805 in view of JP 2003-60013.

As to claims 9, 47-48 and 55, JP'805 discloses (see English translation detailed description; paragraph 6, Figs 1, 2a, 3b and 3d) a system wherein a processing liquid (drug solution with an etching) is supplied to one major surface of a substrate and one major surface is subjected to predetermined substrate processing, comprising: an atmosphere blocking member (base 1) which is faced with other major surface of the substrate and that is away from the substrate (W); and a gas supply unit (gas 11) which supplies an atmosphere gas to a space which is created between the atmosphere blocking member (base 1) and the substrate (W), a rotation means rotating the base with the substrate and wherein the atmosphere blocking member (base 1) which is

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faced with other major surface of the substrate and that is away from the substrate (W) becomes closer to the substrate with a distance toward a periphery edged of the atmosphere blocking member (see Figs 3b and 3d). JP'805 further teaches at least three or more support members (attachment components 3) which are disposed at the periphery edge of the atmosphere-blocking member (base 1) abutting on an edge surface of the substrate and supporting the substrate (see paragraph 26 and Figs 1, 2a, 3b and 3d). In the embodiment of Fig 2a of JP'805 the radius of the (bottom portion) atmosphere blocking member is smaller than that of the radius of the substrate and the peripheral edge area of the bottom portion of the atmosphere blocking member (base) is not exposed around the substrate. JP'805 lacks teaching a system including a substrate having a notch at the periphery edge of the substrate. JP'013 discloses a substrate (W) having a notch (N) indicating an orientation at the peripheral edge, supported by a system having wafer support members (pins 51), which are similar to JP'805's attachment components (3). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include a substrate having a notch at the edge in JP'805 to reliably treat the wafer without damage as taught by JP'013.

As to claim 4, JP'805 discloses a central area of the substrate -facing surface which is faced with an approximately central portion of the substrate is flat surface (see particularly Fig 3d) and a periphery edge area of the substrate-facing surface of the atmosphere blocking member (base 1) which is faced the periphery edge of the substrate is angles surface which becomes closer to the substrate with a distance toward a periphery edge of the substrate-facing surface.

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With respect to claims 50-52, in JP'805 the support member (3) comprises a contact surface in line contact with the edge surface of the substrate, wherein a width of the contact is the same as the width of a portion of the line of contact and the line of contact becomes narrower with a distance away from the substrate (see Figs 2a-2d and 3a-3d).

As to claim 53, JP'805 lacks teaching a transportation unit transporting the substrate to the processing unit. Wen discloses (see fig 7) a transportation unit (transfer units 118,119), which transports substrates to the processing unit. It would have been obvious to one of ordinary skill in the art at the time the invention was made to include a transportation unit in JP'805 to move the substrate in and out of the processing unit.

7. Claim 54 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP 10-116805 and JP 2003-60013 as applied to claim 9 and 10 and further in view of Matsukawa et al (US 5,518,542). JP'805 as modified lacks teaching a reversing unit, which reverses substrate. Matsukawa et al discloses (see Figs 6-7 and Abstract) double-sided substrate cleaning apparatus having a transportation unit (conveying mechanism 5) to transfer the substrate from processing unit and reversing unit (reversing mechanism 10) to reverse the substrate. It would have been obvious to one of ordinary skill in the art at the time the invention was made to include a reversing unit in JP'805 in case one of the upper or the lower processing fluid supplying means is not working and reversing of the substrate is required.

Allowable Subject Matter

8. Claims 59-61 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

9. The following is a statement of reasons for the indication of allowable subject matter: the closest prior art of record, JP'805 fails to teach each and every limitation of the instant invention. Specifically, fails to teach or reasonably suggest the claimed relationship of the structural limitation of the substrate processing system(see claim 59) in combination with the particular substrate having a notch at the peripheral edge of the substrate, wherein the substrate-facing surface of the atmosphere blocking member is smaller in plan view than the substrate by a radial width of the notch at the peripheral edge of the substrate.

Response to Arguments

10. Applicants' arguments filed 06/11/2008 have been fully considered but they are not fully persuasive.

Applicants argue (see remarks pages 8-9) about the appropriateness of claims reciting the relationship between the size of the atmosphere-blocking member and the size of the substrate. It is noted that examiner rejections (see Final rejection sent on 02/11/2008) do not include rejections under 112 2nd paragraph. The claims then are found to be clear. It is true as applicants have argued that the sizes of the blocking

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members are variable depending the size of the substrate (the size of the atmosphere blocking member is determined based on the size of the substrate-to-be processed, see page 10). However, applicants' claim 9 recites limitation (see lines 1-4) "wherein a processing liquid is supplied to one major surface of a substrate... said substrate being provided with a notch...a radial width of the notch being predetermined" that is directed to the intended use of the apparatus. No structure is added to the claimed apparatus by reciting this limitation. A claim containing a "recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus" if the prior art apparatus shows all of the structural limitations of the claim. *Ex parte Masham*, 2 USPQ2d 1647 (Bd. Pat. App. & Inter. 1987). Furthermore, "expressions relating the apparatus to contents thereof during an intended operation are of no significance in determining patentability of the apparatus claim." *Ex parte Thibault*, 164 USPQ 666,667 (Bd. App. 1969). Thus, the "inclusion of material or article worked upon does not impart patentability to the claims." *In re Young*, 75 F.2d 966, 25 USPQ 69 (CCPA 1935) (as restated in *In re Otto*, 312 F.2d 937, 136 (USPQ 458, 459 (CCPA 1963)). In this case, the substrate provided with a notch does not impart patentability to the claims.

In claim 59, applicants positively recite the substrate with the notch in the substrate processing apparatus combined with the substrate claim. Since, JP'805 does not teach a substrate having a notch portion, the claimed relationship of the structural limitation of the substrate processing system with the particular substrate having a notch is not met by JP'805.


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Any inquiry concerning this communication or earlier communications from the examiner should be directed to YEWEBDAR T. TADESSE whose telephone number is (571)272-1238. The examiner can normally be reached on Monday-Friday 8:00 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nadine Norton can be reached on (571) 272-1465. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Yewebdar T Tadesse/
Primary Examiner, Art Unit 1792

<i>Application Number</i> 	Application/Control No.	Applicant(s)/Patent under Reexamination	
	10/669,520	SATO ET AL.	
	Examiner YEWEBDAR T. TADESSE	Art Unit 1792	